

What is claimed is:

1. A ceramic envelope for a high intensity discharge lamp formed by integrally molding at least end portions of a barrel section forming a discharge space and small-diameter electrode insertion sections provided to protrude outward from the end portions of the barrel section, respectively, the entire ceramic envelope made of light transmittable ceramics, wherein

R is provided inside of a boundary end portion between said barrel section and at least one of said electrode insertion sections, and a value of the R is set at 0.01 to 3.0 mm.

2. A ceramic envelope for a high intensity discharge lamp according to claim 1, wherein

a surface roughness Rmax of an inner surface of the barrel section is set at 0.01 to 0.4 μm ; and

a density of an additive on the inner surface of the barrel section is not more than half a density of the additive in a thick central portion of the barrel section.

3. A ceramic envelope for a high intensity discharge lamp according to claim 2, wherein

the additive consists of at least one selected from a group consisting of Sc_2O_3 , MgO , ZrO_2 , Y_2O_3 and a lanthanoid-based rare earth oxide.